FACT SHEET FOR NPDES PERMIT WA0000728
TOSCO 76 TACOMA TERMINAL

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INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the state of Washington on the basis of Chapter 90.48 Revised Code of Washington (RCW) which defines the Department of Ecology's (Department) authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the state include procedures for issuing permits [Chapter 173-220 Washington Administrative Code (WAC)], water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the Public Notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit, and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix D--Response to Comments.

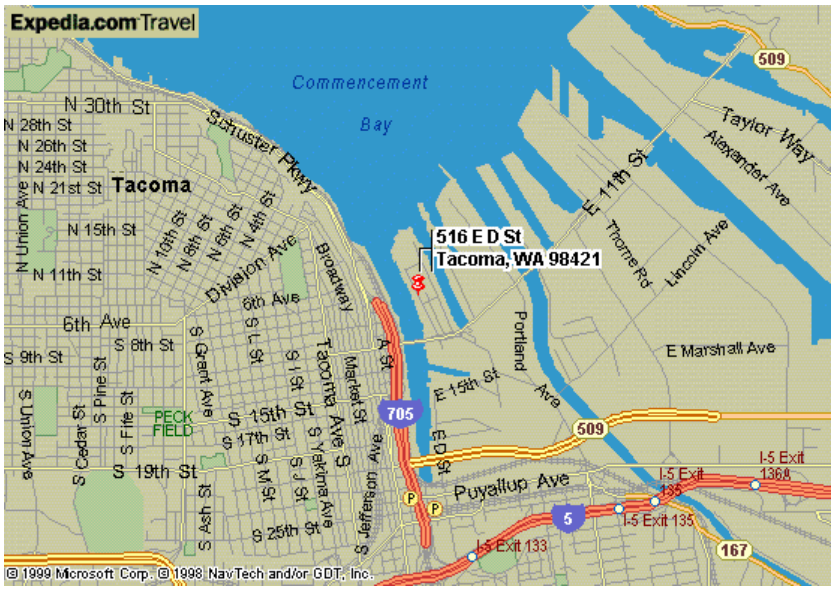
GENERAL INFORMATION	
Applicant:	Gary Clark
Facility Name and Address:	Tosco 76 Tacoma Terminal 516 East "D" Street Tacoma, WA 98401
Type of Facility:	Petroleum Bulk Storage and Distribution
SIC Code:	5171
Discharge Location:	Thea Foss Waterway Latitude: 47° 15' 31" N Longitude: 122° 25' 59" W
Water Body ID Number:	WA-10-0030

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

Tosco 76 Tacoma Terminal is located on the eastern bank of Thea Foss Waterway (City Waterway) at 516 East "D" Street, Tacoma, Pierce County. Tosco 76 Tacoma Terminal is classified as a Petroleum Bulk Station and Terminal, SIC Code 5171.

The terminal is located on two rectangular parcels on each side of East "D" Street, with a combined area of about 180,000 square feet. Petroleum storage consists of ten aboveground storage tanks ranging in size from 21,000 to 1,631,490 gallons, all on the east side of East "D" Street. Tosco's office facility, marine unloading dock, truck loading rack, and water treatment facilities are located on the west side parcel.



HISTORY

The facility was built and first operated in the 1920s by Union Oil of California as a bulk petroleum storage and distribution facility. Union Oil later changed its name to UNOCAL Corporation. Since April 1, 1997, this facility has been operated by Tosco Distribution Company, 9653 Santa Fe Springs Road, Santa Fe Springs, CA 90670.

The facility underwent a major reconstruction in 1977, when tanks, pipelines, and dikes were refurbished or replaced.

INDUSTRIAL PROCESS

The Tosco 76 Tacoma Terminal is a bulk petroleum storage, distribution, and blending facility with a normal fill height storage capacity of approximately 138 thousand barrels (5.8 million gallons). Activities include receiving, storing, and distributing refined petroleum products. The terminal presently receives gasoline (unleaded 87 and 92 octane, and blends these into 89 octane) and diesel #2. In addition, the facility stores two additives (PurAdd-76 & Chevron Techron). These are blended with gasoline at the truck loading rack.

The terminal receives products via pipeline, marine vessel, and tank trucks, and distributes products via tank truck. Tosco 76 also refuels marine tugs at its dock. The receiving pipeline is located above ground throughout the facility. Pipelines to the truck loading rack are above and below ground.

The annual facility throughput is approximately 175,600,000 gallons per year. Throughput tends to be fairly flat throughout the year, with a slight summer increase. Tosco does not have firm plans for any major changes in throughput or operation of the facility at this time.

The terminal is open 24 hours a day, 7 days per week. Six employees operate three shifts Monday through Friday, from 10 p.m., Sunday evening through 11 p.m., Friday evening. The terminal is also staffed Saturday and Sundays for ten hours each.

DISCHARGE AND TREATMENT SYSTEM

Tosco captures, treats, and discharges stormwater runoff, plus any spills that occur on the property. The facility consists of 4.13 acres, which includes tank farm, loading rack, and office building. Stormwater is collected from the whole site. High dikes surround the tank farm. The capacity of secondary containment is equal to the capacity of the biggest tank in the tank farm area plus allowances for stormwater and fire protection. The area within the dikes is not accessible by vehicles and is lined with 6-inch thick bentonite clay covered by gravel. Areas outside the tank farm are generally paved with commercial asphalt with minor areas of concrete paving and bare ground.

Runoff from the tank farm, the facility's paved areas, marine dock, and the loading rack is collected and treated in a 9,130-gallon API underground oil/water separator with a coalescing and diffusion baffle. The water is then pumped to a 20,000-gallon above ground settling tank. Tosco 76 tests the treated runoff after settling in the settling tank to ensure compliance with the NPDES permit. If the test results meet the NPDES permit requirements, the runoff is discharged from the settling tank. However, if treated runoff does not meet the NPDES permit limits, it is diverted through three 10-micron mesh particulate filters and two granular activated carbon canisters, then tested once again before discharge. Accumulated sludge is disposed of as hazardous waste by a licensed hauler.

Since the current permit was written, Tosco upgraded their treatment system by adding the settling tank, cloth prefilters, and activated carbon units mentioned above.

DISCHARGE OUTFALL

Tosco's treated water is discharged in batches. The outfall consists of a single pipe into the Thea Foss Waterway. The outfall pipe may be below or above the water line, depending on the water level in the Waterway. Because of higher tides and greater stormwater inputs to the waterway in the winter, the pipe is exposed more often in the summer than winter. Since Tosco treats primarily stormwater, much of the discharge should occur when the outfall pipe is covered. A dilution zone has not been established for the outfall.

PERMIT STATUS

The previous permit for this facility was issued on November 16, 1993. This permit placed effluent limitations as listed in Table 1.

Table 1: Previous permit effluent limitations- Outfall 001

Parameters	Units	Monthly Average	Daily Maximum
Oil and Grease (O&G)	Milligrams per litter (mg/L)	10	15
	No visible sheen		
Total Suspended Solids (TSS)	mg/L	30	45
Benzene	mg/L	-	0.071
Toluene	mg/L	report	report
Ethylbenzene	mg/L	-	0.1
Xylenes	mg/L	report	report
Total Petroleum Hydrocarbons-Gasoline (TPH-G)	mg/L	-	1
Total Petroleum Hydrocarbons-Diesel (TPH-D)	mg/L	-	10
pH	Stand. Units (SU)	Not outside the range of 6 to 9	
Copper (total recoverable)*	mg/L	-	0.0025
Lead (total recoverable)*	mg/L	-	0.151
Zinc (total recoverable)*	mg/L	-	0.085
* - no longer applicable - the requirement to test for metals became inapplicable when Tosco notified the Department that truck washing had ceased, and loadrack washwater and tanks water draws were no longer discharged into the stormwater system (July 14, 1997, DMR cover letter to Ecology).			

The current permit expired November 23, 1998. An application for permit renewal was submitted to the Department on January 22, 1998, and accepted by the Department on May 4, 1998.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on December 17, 1999. The facility's previous compliance inspection, without sampling, was conducted on June 17, 1999. The facility was found to be in compliance at that time.

Between 1994 and 1997, UNOCAL reported numerous exceedances of permit limits: benzene (5), ethylbenzene (2), petroleum hydrocarbons (6), pH (1), and total recoverable zinc (11) and copper (9). However, since April 1997, when the permit was transferred to Tosco, the Permittee has remained in substantial compliance based on Discharge Monitoring Reports (DMRs) submitted to the Department and inspections conducted by the Department. From April 1997, through August 1999, Tosco 76 reported one permit exceedance:

4/98 pH 5.81 vs. 6

Tosco 76 also failed to report visual observation for oil and grease sheen near the outfall in April 1997, and for the July, August, September 1999, quarterly report.

WASTEWATER CHARACTERIZATION

The proposed wastewater discharge is characterized for the following regulated parameters:

Table 2: Wastewater Characterization

Parameter	Permit Application	DMRs, 4/97-99
BOD	3 mg/L	-
COD	<5 mg/L	-
TOC	0.8 mg/L	
TSS	<2 – 3 mg/L	<2 – 2 mg/L
pH	6.1 – 6.4	5.81 – 7.36
Oil & Grease	<5 mg/L	<5 mg/L
TPH-G	<0.0005 - 0.35 mg/L	<0.05 - 0.03 mg/L
TPH-D	<0.25 mg/L	<0.23 - 1.1 mg/L
Benzene[1]	<0.0005 – 0.0018 mg/L	0.0005 mg/L
Ethylbenzene[1]	<0.0005 – 0.0099 mg/L	0.0005 mg/L
Toluene[1]	<0.0005 mg/L	0.0005 mg/L
Xylenes	<0.0005 – 0.024 mg/L	<0.0015-0.006 mg/L
Copper, total[2]	<0.02 mg/L	-
Lead, total[2]	<0.15 mg/L	-
Zinc, total[2]	<0.02 mg/L	-

[1]Benzene, ethylbenzene, and toluene are components of gasoline.

[2]Lead, zinc, and copper might be present in low concentrations if the facility conducts truck washing or treats tank drawdown water or loading rack wash water. As per Unocal's Engineering Report dated March 10, 1997, permit application (9 January 1997 p. 3), and July 14, 1997 DMR cover letter to Ecology, these activities are no longer conducted.

SEPA COMPLIANCE

This facility and permit has no SEPA compliance issue.

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in a NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. Ecology does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Effluent limits are not always developed for pollutants that may be in the discharge but not reported as present in the application. In those circumstances, the permit does not authorize discharge of the non-reported pollutants. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. Effluent discharge conditions may change from the conditions reported in the permit application. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department. The Permittee may be in violation of the permit until the permit is modified to reflect additional discharge of pollutants.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Technology-based limitations are set by regulation in the federal effluent guidelines or on a case-by-case basis using Best Professional Judgment (BPJ) when no effluent guidelines exist for an industrial category. Technology-based limits represent the best treatment a facility can achieve consistent with the economic means of the industry as a whole (in the case of effluent guidelines) or of the specific facility being permitted (in the case of BPJ). Technology-based effluent limits are process control parameters or numbers that indicate a process- in this case, wastewater treatment- is not functioning properly.

Past performance indicates that Tosco's current treatment system is reliable and can produce a high quality effluent. This system - gravity oil/water separator followed by further settling, particulate filtration, and activated carbon treatment - meets AKART criteria for stormwater runoff from bulk petroleum storage facilities.

EFFLUENT LIMITATIONS

The oil & grease limits are consistent with the Department's policy for direct discharge, and are based on the proven performance of gravity oil/water separators.

Limits for pH are standard for most NPDES permits, and are based on simple pollution prevention and neutralization techniques.

The limit for BTEX is derived from demonstrated performance of bulk petroleum tank farms in minimizing discharge of petroleum-based compounds through stormwater pollution prevention techniques and use of gravity oil/water separators. BTEX is the sum of the concentrations of detected levels of benzene, toluene, ethylbenzene and xylenes, and thus replaces limits for each individual parameter.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC), is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

The Thea Foss Waterway is listed on the Candidate 1998 Section 303(d) List (June 15, 1998) for the following pollutants: 1,2-Dichlorobenzene, 2-Methylnapthalene, Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(g,h,i)Perylene, Bis(2-ethyl hexyl) Phthalate,

Butyl Benzyl Phthalate, Chrysene, Dibenzo(a,h)anthracene, Dimethyl Phthalate, Fluoranthene, Fluorene, HPAH, Indeno(1,2,3-c,d)pyrene, LPAH, Phenathrene, Pyrene, Total Benzofluoranthenes, Total PCB's, and copper, lead, mercury, and zinc. The listing of each parameter is based on sediment concentrations, not water column concentrations. Tosco 76 is not believed to currently contribute significant amounts of these pollutants to the Waterway.

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the state of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in receiving water while remaining protective of aquatic life. Numerical criteria set forth in the Water Quality Standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA 1992). These criteria are designed to protect humans from cancer and other disease and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The state of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

MIXING ZONES

The Water Quality Standards allow the Department to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available, and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to the Thea Foss Waterway, which is designated as a Class C receiving water in the vicinity of the outfall. The waterway is part of Commencement Bay, which is a marine estuary. Other nearby point source outfalls include Tosco NW Tacoma Terminal and Shore Terminal, both bulk storage and distribution facilities. Characteristic uses of Class C waters include:

Water supply (industrial); stock watering; fish migration; secondary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall meet or exceed the requirements of selected and essential uses.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992).

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

A determination of reasonable potential resulted in a finding of no reasonable potential. Calculations using all applicable data resulted in a determination that there is no reasonable potential for this discharge to cause a violation of water quality standards. This determination assumes that the Permittee meets the other effluent limits of this permit.

HUMAN HEALTH

Washington's water quality standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992).

The department has determined that the discharge will not cause or contribute to an exceedance of the human health criteria so long as compliance with the technology-based limits of the permit are maintained.

The limit for benzene, 0.071 mg/L, will be retained, to assure compliance with the NTR standard. However, the individual limit for ethylbenzene, 0.1 mg/L, will be dropped, since 1) the new BTEX limit is the same as the existing ethylbenzene limit, but includes the sum of benzene, toluene, ethylbenzene, and xylenes and therefore is more restrictive, and 2) the NTR standard for ethlybenzene is 29 mg/L, and therefore the BTEX limit is much more restrictive.

WHOLE EFFLUENT TOXICITY

The Water Quality Standards for Surface Waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore, this approach is called whole effluent toxicity (WET) testing.

Toxicity caused by unidentified pollutants is not expected in the effluent from this discharge as determined by the screening criteria given in Chapter 173-205 WAC. Therefore, no whole effluent toxicity testing is required in this permit. The Department may require effluent toxicity testing in the future if it receives information that toxicity may be present in this effluent.

UNOCAL conducted one set of bioassays in October 1996. Fathead minnow and ceriodaphnia both passed the acute screening test at 100 percent effluent.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

This Permittee has no discharge to ground and therefore no limitations are required based on potential effects to ground water.

Table 3: COMPARISON OF EFFLUENT LIMITS WITH THE EXISTING PERMIT ISSUED NOVEMBER 16, 1993

Parameter	Existing Permit (Monthly avg./Daily max.)	Proposed Permit (Monthly avg./Daily max.)
Oil & Greases, mg/L	10/15	10/15
Oil & Grease	No visible sheen	No visible sheen
TSS, mg/L	30/45	30/45
Benzene, µg/L	N/A / 71	N/A / 71
Toluene	Report	*
Ethylbenzene, µg/L	N/A / 100	*
Xylene	Report	*
Total Petroleum Hydrocarbon Gasoline (TPH-G), µg/L	N/A / 1.0	N/A / 1.0
Total Petroleum Hydrocarbon Diesel (TPH-D), µg/L	N/A / 10	N/A / 10
BTEX**, µg/L	N/A / N/A	N/A / 100
pH, standard units	6-9	6-9
* - replaced by BTEX.		
** - sum of concentrations of benzene, toluene, ethylbenzene, and xylenes.		

The proposed BTEX limit of 100 µg/L (parts per billion) is more stringent that the sum of the current limits of benzene and ethylbenzene (71+100=171 µg/L).

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies takes into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

LAB ACCREDITATION

With the exception of certain parameters, the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories.* Tosco 76 currently uses Sound Analytical Services Inc., of Fife, for analysis of oil and grease, pH, TSS, benzene, ethylbenzene, toluene, xylene, and metals. Sound is accredited for general chemistry, trace metals, and organics (GC & GC-MS).

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

NON-ROUTINE AND UNANTICIPATED DISCHARGES

Occasionally, this facility may generate wastewater, which is not characterized in their permit application because it is not a routine discharge, and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean wastewaters but may be contaminated with pollutants. The permit contains an authorization for non-routine and unanticipated discharges. The permit requires a characterization of these wastewaters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and opportunities for reuse, Ecology may authorize a direct discharge via the process wastewater outfall or through a stormwater outfall for clean water, require the wastewater to be placed through the facilities wastewater treatment process, or require the water to be reused.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

SOLID WASTE

The discharge of leachate from solid waste is not authorized by this permit.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations, and have been standardized for all individual industrial NPDES permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control its production in order to maintain compliance with its permit. Condition G10 prohibits the reintroduction of removed substances back into the effluent. Condition G11 requires the Permittee to provide any information that the Department may request to establish cause for permit changes or status of compliance and to provide any records required to be kept by the Permittee. Condition G12 incorporates by reference all other requirements of 40 CFR 122.41 and 122.42. Condition G13 notifies the Permittee that additional monitoring requirements may be established by the Department. Condition G14 requires the payment of permit fees. Condition G15 describes the penalties for violating permit conditions. Condition G16 defines an upset of the treatment system and explains the role of an upset in defense of permit violation. Condition G17 states that the permit does not convey a property right. Condition G18 states the duty of the Permittee to comply with the permit and potential consequences of failure to comply. Condition G19 requires the Permittee to comply with the toxic pollutant requirements of the CWA. Condition G20 states the penalties for tampering with test methods or devices used to satisfy monitoring requirements of this permit. Condition G21 explains the requirement to report changes in operation of the facility. Condition G22 requires reporting of any planned changes to the facility that may result in noncompliance with the permit. G23 requires prompt submittal of information that contradicts previously reported information. G24 requires that existing manufacturing, commercial, mining, or silviculture must notify the Department when they trigger specific thresholds of discharge for certain toxic pollutants. G25 establishes the grace period for submittals required in a schedule of compliance.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit because of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued for five years.

REFERENCES FOR TEXT AND APPENDICES

Alpha Engineers and Constructors, Inc., Portland, OR

1997. UNOCAL 76 Tacoma Terminal Effluent Treatment System Engineering Report. March 10, 1997.

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Washington State Department of Ecology

1994. Permit Writer's Manual. Publication Number 92-109

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations that are described in the rest of this fact sheet.

Public notice of application was published on August 30, 1998, and September 5, 1999, in the *Tacoma News Tribune* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on June 17, 2000 in *The Tacoma News Tribune* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the 30 day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least 30 days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within 30 days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 407-6286, or by writing to the address listed above.

This permit and fact sheet were written by Don Reif.

APPENDIX B--GLOSSARY

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period, usually 48 to 96 hours.

AKART-- An acronym for "all known, available, and reasonable methods of treatment".

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation --The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low; thus, its ability to dilute effluent is reduced.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Engineering Report--A document that thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample--A single sample or measurement taken at a specific time or over as short a time period as feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and leachate from solid waste facilities.

Major Facility--A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility--A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both state and Federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Responsible Corporate Officer-- A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C--TECHNICAL CALCULATIONS

Several of the Excel® spreadsheet tools used to evaluate a discharger's ability to meet Washington State water quality standards can be found on the Department's homepage at http.www:wa.gov.ecology.

APPENDIX D--RESPONSE TO COMMENTS

Ecology received one comment letter during the public comment period of the draft permit for Tosco 76. Citizens For A Healthy Bay (CHB), signed by Karen Dinicola, is a non-profit environmental organization that focuses on environmental cleanup, restoration, and protection of Commencement Bay inTacoma. The CHB comments were prefaced, in part, as concerns with protecting recent cleanup efforts in the Thea Foss Waterway of Commencement Bay. CHB also noted the relatively good compliance history of this facility, and noted support for BTEX limits, metals evaluation, and Best Management Practices.

The CHB comments were numbered by issue. The issues are quoted in full, then Ecology's responses are listed.

Comment 1:

The benzene limit in this permit should be no greater than 40 ug/L. This is the limit for the adjacent facility, and a 40 ug/L limit was indicated on the last three quarterly monitoring reports submitted by this facility. In the past two and a half years' DMRs, the facility only had one benzene detection, and that concentration was 1.8 ug/L. Based on this performance, a much lower limit is warranted for this facility.

Response:

Ecology concurs that this facility has a good compliance and performance record for their treatment process. If Tosco remains in compliance, benzene concentrations will not violate water quality criteria. The benzene limit of 71 ug/L is the same limit as in the previous permit and will be retained.

Comment 2:

The oil & grease, TSS, TPH-G, and TPH-D limits should be reduced based on the facility's performance. We suggest oil & grease monthly and daily limits of 5 and 10 mg/L; TSS limits of 10 and 15 mg/L; a TPH-G limit of 0.5 mg/L; and a TPH-D limit of 5 mg/L. The sampling frequency for TPH-D and TPH-G has been reduced; this is only justified by the addition of the BTEX parameter and improved performance as reflected by a lower standard. This facility can easily achieve and surpass these suggested limits.

Response:

Permit limits must be technology-based. One option for technology-based limits is performance-based limits. A database of previous monitoring results is statistically evaluated at specific (e.g. 99 and/or 95 percent) confidence intervals. This method is used when other options don't exist, or it is deemed to be the most appropriate method. The limits for this draft permit were not derived through the performance-based evaluation process.

Monitoring frequency is a separate issue in Ecology's permit writers guidance, and is not linked to lower limits. The limits will remain as per the draft.

Comment 3:

State when- - during what season of which year - -Ecology wants the facility to collect the priority pollutant metals sample. We suggest the sample be collected during the first year of the permit cycle. The sample should capture a first flush event in the fall to best evaluate the effectiveness of BMPs at the yard. And the earlier in the permit cycle the sample is collected, the sooner Ecology can respond to the results. Metals limits were removed during the last permit cycle because of a change in procedures at the site.

Response:

Ecology concurs that more clarity would be helpful. To this end, language will be added to clarify that, as CHB suggests, this sample is to be collected during a first flush event in the first fall of the permit term.

Comment 4:

Section S6 Items 7 and 10 should have expanded language to include delivery of petroleum products via barge. Since the explosion of the Olympic Pipeline in Bellingham, barge traffic has increased to the petroleum facilities on this Waterway. In subsection 10, we suggest the opening phrase read, "Once during each pipeline or barge receipt…" In subsection 7, another desirable BMP would be prebooming around barges that are off-loading fuel to the facility: this voluntary practice is implemented at other petroleum facilities in Commencement Bay.

Response:

Ecology will add language to item #10 of Section S6 to include deliveries by both barge and pipeline.

Preventive booming around the dock during transfers was addressed in the public comment response process for Tosco's Tacoma Terminal permit renewal in early July. As explained at that time, Ecology will not add this BMP to Tosco's NPDES permit. Ecology strongly supports the pre-deployment of booms as a cost-effective and logical preventive measure, and recommends that Tosco re-consider the feasibility of predeploying boom as a routine operation. We also acknowledge that at least several facilities routinely deploy containment boom as a preventive measure.

Tosco has several spill prevention and countermeasures in place. A permanent protective boom lines the shore in the vicinity of Tosco's dock, which serves both Tosco facilities on D Street. Also, a dedicated spill response boat is routinely docked at Tosco, with spill response personnel quickly available. Ecology reviews and approves spill prevention plans under Chapter 173-180 WAC. Ecology spill response personnel are currently reviewing Tosco's latest plan for approval.

Also, CHB pointed out a grammatical error in item #12 of section S6 - thank you. This has been corrected.